

SOME DEFORMITIES OF THE HAND.

BY ELIOT ALDEN, M.D.,

OF LOS ANGELES, CAL.,

Instructor in Surgical Anatomy in the University of Southern California.

THE following patients with deformities of the hands seem of sufficient interest to be recorded.

CASE I.—*Web Fingers and Other Deformities.*—The patient, a man 58 years old, presented himself at my clinic for a callus on the sole of his foot. As the photograph (Fig. 1) shows, the fingers of the right hand are short and the webs, especially between the middle and ring fingers, extend farther towards the ends of the fingers than normal. The fingers have the normal number of joints. On the left hand the thumb lacks the terminal phalanx and also the nail. The index and middle fingers are united by a web as far as the base of the nail on the index finger. The webs between the middle and ring, and ring and little fingers are greater than normal. The terminal phalanges of the index and little fingers have slight motion, all the remaining joints are immovable.

The X-ray plate of the right hand (Fig. 2) shows remarkable shortening of the middle phalanges of all the fingers, the proximal and distal phalanges being normal. The plate of the left hand (Fig. 3) shows but one phalanx in the thumb and an absence of the usual sesamoid bone. The middle phalanx of the index finger is apparently fused with the distal phalanx which is abnormally long and irregular at its base. In the other three fingers the middle phalanx is not represented. In the middle and ring fingers the proximal and distal phalanges are fused together by true bony ankylosis, the trabeculae of bone passing from one bone to the other.

The man has worked as a carpenter and says the disability has been but slight. He has also a cleft of the soft and hard palates and a depression of the upper, left alveolar arch, the latter due to the kick of a horse.

CASE II.—*Loss of the Proximal Phalanx of the Index Finger.*—The patient was a man, aged 70, who presented himself

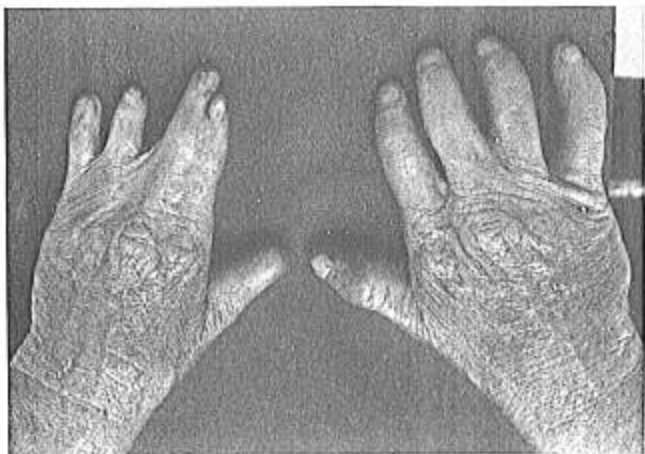
for varicose ulcers of the leg. Many years ago, "when Garfield was President," he cut his right hand on a circular saw, the index finger being nearly severed. His physician wished to amputate the finger but he would not allow it and simply wrapped the finger in a piece of cloth. Later the bone protruded from the wound and he returned to the physician and requested him to remove the protruding part. This the physician did with a pair of bone cutters. The wound eventually healed. Further details of treatment and healing are not remembered.

The index finger of the right hand is shortened to the level of the second interphalangeal joint of the middle finger (Fig. 4). Flexion and extension of the index finger are nearly normal but the range of motion in the terminal joint is somewhat limited. The grip between the thumb and forefinger is as great as that between thumb and an equal length of forefinger of the left hand. The remaining three fingers and the thumb show Heberden's nodes. They are most marked on the thumb and little finger.

The X-ray plate (Fig. 5) shows the absence of the proximal phalanx of the index finger except a small portion of the base. Clinically this fragment is ankylosed to the metacarpal bone, the motion taking place in the false joint between the fragment and the middle phalanx. This ankylosis is fibrous. (Compare with the true bony ankylosis represented in the plates of Case I, Fig. 3.) The terminal phalanges of other fingers and especially of the thumb show the bony changes of arthritis deformans.

The remarkable feature of this case is the adaptation of the muscles to the shortened finger. The finger has been shortened about one and a half inches, yet the flexor and extensor muscles have compensated for the slack, and without interfering with the portions controlling the other fingers. The perfection of the false joint is also noteworthy. That the tendons escaped injury seems improbable yet they were not sutured and seem to have made a perfect recovery.

FIG. 1.



Photograph of Case 1.

FIG. 2.



X-ray of Case I, right hand

FIG. 3.



X ray of Case I, left hand.

FIG. 4.



Photograph of Case 2, showing loss of proximal phalanx of index finger

FIG. 5.



X-ray of Case II, showing absence of first phalanx of index finger.